Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] 1. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein two wave fronts meet at a location inside the media and said location uniquely identifies a location within said continuous range.

[c2] 2. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein at least two waves propagate in the same direction with different phase velocities and two wave fronts meet at a location inside the media and said location uniquely identifies a location within said continuous range.

[c3] 3. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media by distinct passes, wherein fronts of two waves interfere in a media that reveal nonlinear properties and location of said interference uniquely identifies a location within said continuous range.

[c4] 4. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media by distinct passes, wherein fronts of two waves interfere in a media that reveal nonlinear properties and location of said interference uniquely identifies a location within said continuous range, and wherein there are at least two waves propagating in the same direction with different velocities.

[c5] 5. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein two wave fronts meet at a location inside the media and said location uniquely identifies a location within said continuous range, wherein at least two waves have shape of pulses with defined length.

[c6] 6. A method of claim 2, wherein at least two waves have shape of pulses with defined length.

[c7] 7. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media by distinct passes, wherein fronts of two waves interfere in a media that reveal nonlinear properties and location of

said interference uniquely identifies a location within said continuous range, wherein at least two waves have shape of pulses with defined length.

[c8] 8. A method of claim 4, wherein at least two waves have shape of pulses with defined length.

[c9] 9. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein two wave fronts meet at a location inside the media and said location uniquely identifies a location within said continuous range, wherein at least one waves have shape of Gaussian pulse with defined width.

[c10] 10. A method of claim 2, wherein at least one waves have shape of Gaussian pulse with defined width.

[c11] 11. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media by distinct passes, wherein fronts of two waves interfere in a media that reveal nonlinear properties and location of said interference uniquely identifies a location within said continuous range, wherein at least one waves have shape of Gaussian pulse with defined width.

[c12] 12. A method of claim 4, wherein at least one waves

have shape of Gaussian pulse with defined width.

[c13] 13. A method of addressing a continuous range of locations in physical media that employs interference of at least two waves propagating in continuous media, wherein two wave fronts meet at a location inside the media and said location uniquely identifies a location within said continuous range, wherein properties of said propagation media nonlinear with respect to amplitude of at least one of said waves.

[c14] 14. Method of claim 2, wherein properties of said propagation media nonlinear with respect to amplitude of at least one of said waves.

[c15] 15. An artificially produced structure capable of propagating particular types of waves with low attenuation and utilizing interference of waves to dynamically alter a physical property of confined volume of compositing material.

[c16] 16. An artificially produced structure of claim 15, wherein said structure has at least one of its base dimensions (height, width, length) 100 times larger than other two dimensions.

[c17] 17. An artificially produced structure of claim 16 that can be bent to form a loop with minimal diameter less than 5

mm.

[c18] 18. An artificially produced structure capable of propagating particular types of waves with low attenuation and having shape resembling fiber and laid out to cover two-dimensional surface using ordered pattern.

[c19] 19. A structure of claim 18 where in said pattern resembles woven fabric.

[c20] 20. A structure of claim 18 where in said pattern is parallel lines.

[c21] 21. A structure of claim 19 where in said pattern is rows and columns, wherein angle between the rows and the columns may be other then $\pi/2$.

[c22] 22. An artificially produced structure of claim 15, wherein said structure has at least one of its base dimensions (height, width, length) 100 times smaller other dimension.

[c23] 23. An artificially produced structure capable of propagating particular types of waves with low attenuation and utilizing interference of waves to query a value of predefined physical property of dynamically selected confined volume of compositing structure.

[c24] 24. A structure of claim 15 that contains materials with

electro-optical properties and said properties are dynamically changed.

[c25] 25 A continuously addressable material utilizing the method of this invention, where in functional layer, as defined in this invention, contains continuous sensor regions.

[c26] 26. A continuously addressable material utilizing the method of this invention, where in functional layer, as defined in this invention, contains arrays of discrete microstructures.

[c27] 27. A continuously addressable material utilizing the method of this invention, where in functional layer, as defined in this invention, contains continuous regions transmitting an energy and continuous sensor regions, and information obtained form sensor regions utilized to adjust functions of said transmitting regions.